

SEARCH REQUEST FORM

9-159

Requestor's

Name: K. Weddington

Serial

Number: 08/338,489Date: 9-3-98Phone: 308-4650Art Unit: 1614

2A17

Search Topic:

Please write a detailed statement of search topic. Describe specifically as possible the subject matter to be searched. Define any terms that may have a special meaning. Give examples or relevant citations, authors, keywords, etc., if known. For sequences, please attach a copy of the sequence. You may include a copy of the broadest and/or most relevant claim(s).

Treating systemic fungal diseases with
a pepper plant of the genus
1) Capsicum Peperoma or species
Piper tetrafractum, Piper longum, or
Piper nigrum.

1998 SEP -3 PM 12:47

STAFF USE ONLY

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08/338489

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=> d que

L1 649 SEA (CAPSIC? OR C) (W) PEPPEROM? OR (PIPER OR P) (W) (RETROFR
ACT? OR RETRO FRACT? OR LONGUM OR NIGRUM)
L4 27 SEA L1 AND (ANTIFUNG? OR FUNG? (5A) (TREAT? OR THERAP?) OR
FUNGICID?)

=> dup rem l4

PROCESSING COMPLETED FOR L4

L5 14 DUP REM L4 (13 DUPLICATES REMOVED)

=> d 1-14 .beverly

L5 ANSWER 1 OF 14 CA COPYRIGHT 1998 ACS DUPLICATE 1
AN 126:334246 CA
TI Search for antibacterial and **antifungal** activity of some
plants of Kerala
SO Acta Pharm. (Zagreb) (1997), 47(1), 47-51
CODEN: ACPHEE; ISSN: 1330-0075
AU Sasidharan, V. K.
PY 1997
AB Water and alc. exts. of some plants were tested for antibacterial
and **antifungal** activity. Most of the plants showed
considerable antibacterial and **antifungal** activity. Alc.
exts. of plants were found to be better than aq. exts. The
antimicrobial activity of plant ext. differs with the test organism.
Among the investigated plants, *Ixora coccinea* acts specifically on
prokaryotic system. The therapeutic value of this plant against
prokaryotic infection is high. Since it does not act against
eukaryotic system it is safe for use.

L5 ANSWER 2 OF 14 CAPLUS COPYRIGHT 1998 ACS
AN 1996:429394 CAPLUS
TI Antimycotic screening of 58 Malaysian plants against plant pathogens
SO Pestic. Sci. (1996), 47(3), 259-264
Searcher : Shears 308-4994

- CODEN: PSSCBG; ISSN: 0031-613X
- AU Mohamed, Suhaila; Saka, Suzana; El-Sharkawy, Saleh H.; Ali, Abdul
Manaf; Muid, Sepiah
- PY 1996
- AB Ethanolic exts. of 58 Malaysian plants belonging to 24 different families were screened for **antifungal** activity against seven plant pathogens using the filter paper disk diffusion technique. Two varieties of Piper betle, showed strong activity against all the pathogens tested (Colletotrichum capsici, Fusarium pallidoroseum, Botryodiplodia theobromae, Alternaria alternata, Penicillium citrinum, Phomopsis caricae-papayae and Aspergillus niger), with inhibition diams. significantly ($P < 0.01$) bigger than 2.5 mg mL⁻¹ prochloraz or 10 mg mL⁻¹ clotrimazole. The min. inhibitory concns. of the ethanolic exts. of P. betle against these plant pathogens ranged between 0.01 mg mL⁻¹ and 1 mg mL⁻¹. Thirty-four other plants (Kucing gala, Limau batik, bertholletia excelsa, bixa orellana, Caesalpinia pulcherrima, Cerbera odollam (fruits and leaves), Colocasia gigantea, Curcuma domestica, Curcuma manga, Derris eliptica, Elephantopus scaber, Eleusine indica, Eugenia polyantha, Euphorbia hirta, Euphorbia tirucalli, Gardenia florida, hedyotis auricularia, hibiscus rosa-sinensis, juniperus chinensis (three varieties), Lawsonia inermis, Lecythis ollaria, Mentha arvensis, Mimosa elengi, ocimum sanctum, Phyllanthus niruri, **Piper nigrum**, Piperomia pellucida, pedilanthus tithymaloides, Polygonum minus, Spondias dulcis, Solanum nigrum, tinospora tuberculata) showed selective **antifungal** activity, while 21 species were inactive.
- L5 ANSWER 3 OF 14 CA COPYRIGHT 1998 ACS DUPLICATE 2
- AN 122:306478 CA
- TI Some pharmacodynamic effects and antimicrobial activity of essential oils of certain plants used in Egyptian folk medicine
- SO Vet. Med. J. Giza (1994), 42(1(B)), 263-70
CODEN: VMJGEA; ISSN: 1110-1423
- AU Ramadan, A.; Afifi, N. A.; Fathy, M. M.; El-Kashoury, E. A.;
El-Naeneey, E. V.
- PY 1994
- AB In this study ten essential oils were prepd. from their resp. natural sources namely Cinnamomum cassia bark (cassia), Curcuma sp. rhizomes (curcuma), Elettaria cardamomum fruit (cardamom), Eugenia caryophyllus flower buds (clove), Origanum syriacum herb (za'tar), Origanum majoranum herb (sweet marjoram), **Piper nigrum** fruit (black pepper), Rosmarinus afficinalis leaves (rosemary), Salvia triloba L. (maryamiyah), and Zingiber officinalis rhizomes (ginger). Their percentage yields, specific gravities and refractive indexes were detd. The essential oils of ginger and black pepper markedly stimulated the motility of rabbit jejunum at concns. greater than 47.2 and 70.0 .mu.g/mL, resp. The other essential oils possessed intestinal antispasmodic effects on
- Searcher : Shears 308-4994

isolated rabbit's jejunum. All tested oils produced inhibitory effect on pregnant rat uterus. In the antimicrobial study, the sensitivity of 19 microbes (6 Gram-pos. and 6 Gram-neg. bacteria, and 7 fungi) to tested essential oils was investigated at different concns. (10, 25, 50, 100 and 200 mg/mL). Cassia oil showed a pronounced antibacterial activity against all tested bacteria in vitro. Essential oils of cardamom, curcuma, za'tar, sweet marjoram and maryamiyah showed a moderate antibacterial activity. Results of the **antifungal** study showed that cassia and clove essential oils caused a pronounced **antifungal** activity in vitro and in vivo. Curcuma, za'tar and sweet marjoram showed a marked activity against *Trichophyton mentagrophytes*. Za'tar showed also a moderate inhibitory activity against the other tested fungi.

L5 ANSWER 4 OF 14 CA COPYRIGHT 1998 ACS DUPLICATE 3
 AN 120:127613 CA
 TI Soil percolation and efficacy of **fungicides** on the inoculum of *Phytophthora palmivora* MF4, the incitant of black pepper wilt
 SO Indian Phytopathol. (1992), 45(1), 71-3
 CODEN: IPHYAU; ISSN: 0367-973X
 AU Sastry, M. N. L.; Hegde, R. K.
 PY 1992
 AB The percolation studies with different **fungicides** on their ability to check the soil-borne inoculum of *P. palmivora* MF4, the incitant to black pepper wilt, revealed that drenching of terrazole (1000 ppm) had a total inhibitory effect on the inoculum present up to a depth of 2.5 cm. Dexon and metalaxyl (both at 1000 ppm) drenches had total inhibitory effect on the inoculum present up to a depth of 1.25 cm only. Bordeaux mixt. (at both 0.5 and 1% concns.) was least percolative. In all the above treatments, it was recorded that as the depth at which the inoculum present increases the effect of **fungicides** on *P. palmivora* inoculum decreases.

L5 ANSWER 5 OF 14 CA COPYRIGHT 1998 ACS DUPLICATE 4
 AN 111:211782 CA
 TI Efficacy of selected triorganotin(IV) compounds on leaves against *Phytophthora palmivora* (Butler) Butler isolated from black pepper and cocoa
 SO Appl. Organomet. Chem. (1989), 3(3), 243-8
 CODEN: AOCHEX; ISSN: 0268-2605
 AU Kuthubutheen, A. J.; Wickneswari, R.; Das, V. G. Kumar
 PY 1989
 AB Several triorganotin(IV) compds. and Terrazole 35 WP were screened for their in vitro **antifungal** activity against 3 isolates of *P. palmivora*. Two isolates (isolates Phy. 2 and Phy. 334) were obtained from black pepper and 1 isolate (isolate Phy. 56) from cocoa leaves. ED50 values for radial growth of the isolates ranged from 0.09 to 1700 $\mu\text{g}/\text{cm}^3$ for the triorganotin(IV) compds. and
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from 3.46 to 1,227,000 $\mu\text{g}/\text{cm}^3$ for Terrazole. Diphenylbutyltin bromide (I) exhibited the highest **antifungal** activity against the 3 isolates of *P. palmivora*, with ED50 values ranging from 0.30 to 0.73 $\mu\text{g}/\text{cm}^3$. I was equally effective against a freshly isolated virulent culture of *P. palmivora* (isolate Phy. 346) from black pepper leaves, yielding an ED50 value for radial growth of 0.87 $\mu\text{g}/\text{cm}^3$ and a probit-log concn. regression line slope of 1.04. In vitro efficacy of I against isolate Phy. 346 using detached healthy pepper leaves showed 40-75% infection of leaves at 100 $\mu\text{g}/\text{cm}^3$ and no infection of leaves at 100 $\mu\text{g}/\text{cm}^3$ and no infection at 500 $\mu\text{g}/\text{cm}^3$. I at 100 $\mu\text{g}/\text{cm}^3$, however, inhibited lesion diam. by 43.3-73.7% compared with the untreated controls. Black pepper leaves treated with Terrazole at 778 $\mu\text{g}/\text{cm}^3$ exhibited 5.3-33.3% inhibition of lesion diam. compared with the untreated controls, where 90-100% of the leaves were infected. Concns. of I of 1000-2500 $\mu\text{g}/\text{cm}^3$ caused some injury lesions on the leaves. It appears that I could be used as a protective spray or drench against *P. palmivora* infection of black pepper at 100-500 $\mu\text{g}/\text{cm}^3$.

- L5 ANSWER 6 OF 14 CA COPYRIGHT 1998 ACS DUPLICATE 5
 AN 109:88063 CA
 TI Fungitoxic effect of endosulfan and quinalphos on *Phytophthora palmivora*, the foot rot pathogen of black pepper
 SO Ann. Appl. Biol. (1988), 112(Suppl.), 26-7
 CODEN: AABIAV; ISSN: 0003-4746
 AU Ramachaudran, N.; Sarma, Y. R.
 PY 1988
 AB Both endosulfan and quinalphos were toxic to *P. palmivora* in vitro and in vivo. For example, endosulfan and quinalphos at 150 $\mu\text{g}/\text{mL}$ caused 89.5 and 92.45% sporangial inhibition, resp. Also, they reduced significantly black pepper infection by *P. palmivora*, as shown by the no. of lesions.
- L5 ANSWER 7 OF 14 CA COPYRIGHT 1998 ACS DUPLICATE 6
 AN 104:181625 CA
 TI Efficacy of three systemic **fungicides** in controlling *Phytophthora* infections of black pepper
 SO Indian Phytopathol. (1985), 38(1), 160-2
 CODEN: IPHYAU; ISSN: 0367-973X
 AU Ramachandran, N.; Sarma, Y. R.
 PY 1985
 AB Ridomil [57837-19-1] (500 $\mu\text{g}/\text{mL}$) applied as a soil drench and as a foliar spray (1000 mL/plant) provided complete control of *P. palmivora* in black pepper ; terrazole [2593-15-9] (700 $\mu\text{g}/\text{mL}$) and Aliette [39148-24-8] (2000 $\mu\text{g}/\text{mL}$) lowered disease incidence from 60% (controls) to approx. 10 and 20%, resp. Ridomil also reduced root necrosis more effectively than the other 2 **fungicides**.

L5 ANSWER 8 OF 14 CA COPYRIGHT 1998 ACS DUPLICATE 7
 AN 103:208744 CA
 TI Uptake and persistence of metalaxyl in black pepper (*Piper nigrum* L.)
 SO J. Plant. Crops (1985), 13(1), 38-40
 CODEN: JPCRDW; ISSN: 0304-5242
 AU Ramachandran, N.; Sarma, Y. R.
 PY 1985
 AB The exposure time required for the uptake of metalaxyl (I) [57837-19-1] and its persistence in black pepper (*P. nigrum*) were investigated using a leaf lesion bioassay. I at 1000 ppm applied as soil drench was translocated acropetally in significant quantity even 1 h after application. Leaf infection of I-treated plants was negligible on the 50th day, after which the activity of the fungicide was gradually reduced. I has an advantage over contact fungicides in controlling infections of *Phytophthora palmivora*, esp. under heavy rainfall conditions.

L5 ANSWER 9 OF 14 CA COPYRIGHT 1998 ACS DUPLICATE 8
 AN 96:117386 CA
 TI Evaluation of chemicals for the control of *Phytophthora* from *Piper nigrum*
 SO Malays. Agric. J. (1980), 52(3), 263-72
 CODEN: MAGJAL; ISSN: 0025-1321
 AU Kueh, Tiong Kheng; Khew, Khing Ling
 PY 1980
 AB A no. of org. and inorg. chem. were tested for their effectiveness as growth inhibitors, protectants and eradicants, and as soil drenches against *P. palmivora* (causal organism of foot rot disease of *P. nigrum*). As growth inhibitors, most inorg. carbamate and Ph compds. and the majority of the other org. compds. tested were ineffective, whereas Acti-Dione [66-81-9], DOWCO 269 [7159-34-4] and the org. mercurial compds. tested were very effective against mycelial growth of *P. palmivora*. Among those chem. tested as leaf and root protectants, Aaterra [2593-15-9] and DOWCO 269 were superior. As eradicants for infected leaves and roots, none of the chem. tested were totally effective in eliminating fungus infection; however, Aaterra, Acti-Dione, Difolatan-4F [2425-06-1] and DOWCO 269 were comparatively better in decreasing or delaying the rate of infection. Among the 23 fungicides tested as soil drenches Cu oxychloride, Vapam [137-42-8], Antimucin WBR [62-38-4], Tillex [3696-31-9], Verdasan [62-38-4], Brunolex [80940-92-7], Nectryl [90-43-7], Aaterra, Acti-Dione, Basamid [533-74-4], Ciluan [39374-44-2], Delan [3347-22-6], Difolatan-4F, DOWCO 269, DOW-XD-7603 [80941-35-1], Hoe 2873 [13457-18-6], Lysol [12772-68-8], Neo-asozin [35745-11-0], Shell 345 soil fungicide [80941-29-3], and 1804-L

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[80941-11-3] showed promise.

L5 ANSWER 10 OF 14 CA COPYRIGHT 1998 ACS DUPLICATE 9
 AN 91:14518 CA
 TI Activity of essential oils of three medicinal plants against various
 pathogenic and nonpathogenic fungi
 SO Indian J. Hosp. Pharm. (1978), 15(5), 139-41
 CODEN: IJHPBU; ISSN: 0019-526X
 AU Chaurasia, S. C.; Kher, A.
 PY 1978
 AB Oils of *Piper nigrum*, *Ayapana triplinerve*, and
Mentha arvensis had **antifungal** activities, as detd. by the
 filter paper disk diffusion plate method. The *M. arvensis* oil
 inhibited almost all pathogenic and nonpathogenic fungi. It showed
 good activity against *Penicillium* species and *Aspergillus cervinus*.
 The **antifungal** activities of the other 2 oils were lower
 than that of *M. arvensis* oil.

L5 ANSWER 11 OF 14 CA COPYRIGHT 1998 ACS DUPLICATE 10
 AN 91:205566 CA
 TI Effects of some herbicides and **fungicides** on the growth of
 the *Cephaleuros* in culture
 SO Physiol. Micro-Org., Symp. (1977), Meeting Date 1976, 119-33.
 Editor(s): Bilgrami, K. S. Publisher: Today Tomorrow's Printers
 Publ., New Delhi, India.
 CODEN: 41TVAF
 AU Jose, G.; Chowdary, Y. B. K.
 PY 1977
 AB Isolates of the parasitic alga *Cephaleutros* were obtained from 11
 hosts and were grown in culture. Tolerance of these isolates toward
 various concns. of herbicides (0.01-0.0001%) was tested. The result
 showed that the isolates from different hosts varied in their
 tolerance towards simazine (I) [122-34-9], atrazine [1912-24-9],
 prometryne [7287-19-6], amitrole [61-82-5], phygon-XL [117-80-6],
 cupramar [1317-39-1], and unizeb [12122-67-7]. An isolate from
Anacardium showed high tolerance towards these chems. While the
 isolates from *Mangifera* and *Madhuca* showed least tolerance towards
 herbicides, the isolate from *Ficus* showed least tolerance towards
fungicides. The various isolates of *Cephaleuros* were
 characterized.

L5 ANSWER 12 OF 14 CA COPYRIGHT 1998 ACS DUPLICATE 11
 AN 80:11082 CA
 TI Effects of **fungicides** used as soil drenches in laboratory
 tests against *Phytophthora palmivora* from *Piper*
nigrum
 SO Trans. Brit. Mycol. Soc. (1973), 61(Pt. 1), 186-9
 CODEN: BMSTA6
 AU Turner, G. J.

Searcher : Shears 308-4994

PY 1973
 AB The **fungicidal** preps. Vapam [137-42-8], Tillex [26983-51-7], Dazomet [533-74-4], and Shell SD 345 [869-29-4] at 0.2-0.8% were effective against *P. palmivora* held on an agar disk in a sterile soil sample during 24 hr contact with each **fungicide**. Most of 25 other com. **fungicides** had no effect on the fungus.

L5 ANSWER 13 OF 14 CA COPYRIGHT 1998 ACS DUPLICATE 12
 AN 78:615 CA
 TI **Antifungal** studies on some indigenous volatile oils and their combinations
 SO Planta Med. (1972), 22(2), 136-9
 CODEN: PLMEAA
 AU Jain, S. R.; Jain, M. R.
 PY 1972
 AB The essential oils from *Zanthoxylum alatum* and, to a less extent, those from *Acanthospermum hispidum*, *Polyalthia longifolia*, *Blumea eriantha*, and **Piper nigrum** showed good **antifungal** activity against several pathogenic and nonpathogenic fungi, and may have medicinal value when used in topical preps. The fungi *Trychophyton rubrum*, *Phialophora verrucosa*, and *Microsporum cookei* were not affected by the oils.

L5 ANSWER 14 OF 14 CA COPYRIGHT 1998 ACS DUPLICATE 13
 AN 72:75770 CA
 TI Leaf lesions associated with foot rot of **Piper nigrum** and *Piper betle* caused by *Phytophthora palmivora*
 SO Trans. Brit. Mycol. Soc. (1969), 53(Pt. 3), 407-15
 CODEN: BMSTA6
 AU Turner, G. J.
 PY 1969
 AB Leaf surface and maturity affected the no. of developing lesions. With zoospore inocula more lesions developed on lower than on upper surfaces, and more on immature than mature leaves. Visible lesions developed within 24-36 hr and 36-48 hr on immature and mature leaves, resp. Increasing high humidity exposure periods increased rates of lesion growth. Spores developed on upper and lower surfaces of leaves, being more abundant on the latter. In the absence of disease on underground stems and adventitious roots, the presence of leaf lesions at a height of 3.3 m suggests that the pathogen can be spread aurally. Of a range of **fungicides**, Cu, Hg, and Sn compds. protected foliage from subsequent invasion but none eradicated existing infections.

=> d his 16

L6 6 S L4

=> d 1-6 bib abs

L6 ANSWER 1 OF 6 USPATFULL
 AN 1998:101277 USPATFULL
 TI Method and composition for promoting and controlling growth of plants
 IN Yamashita, Thomas T., 1094 Clover La., Hanford, CA, United States 93230
 PI US 5797976 980825
 AI US 97-795192 970204 (8)
 RLI Continuation of Ser. No. US 96-682850, filed on 12 Jul 1996, now abandoned which is a continuation of Ser. No. US 90-490351, filed on 8 Mar 1990, now patented, Pat. No. US 5549729 which is a continuation-in-part of Ser. No. US 89-354155, filed on 19 May 1989, now abandoned And Ser. No. US 88-242951, filed on 9 Sep 1988, now abandoned
 DT Utility
 EXNAM Primary Examiner: Nguyen, Ngoc-Yen
 LREP Bozicevic & Reed LLP; Field, Bret E.
 CLMN Number of Claims: 24
 ECL Exemplary Claim: 4
 DRWN 4 Drawing Figure(s); 2 Drawing Page(s)
 LN.CNT 2669
 AB Composition for and method of stimulating growth of plants, e.g. increase in crop production. The composition comprises a carbon skeleton/energy component, typically a sugar or mixture of sugars; a macronutrient component providing the elements nitrogen, phosphorus, potassium and calcium, preferably also magnesium and sulfur; a micronutrient component providing zinc, iron and manganese, preferably also copper, boron, molybdenum and cobalt. The composition also preferably contains a vitamin/cofactor component and an enhancement component. The composition may be in the form of an aqueous solution or in a form suitable for coating seeds or coating pollen. It may be applied as a foliar spray, as a soil amendment, as a root dip or as an injectable solution. Preferably where, for example, it is used as a foliar spray it is applied at intervals at different stages of growth. The method is useful for treating vegetation to promotes plant growth and/or crop production, also for treating pollen, seeds, roots and soil and inhibiting growth of insects and micro-organisms. A formulation including an energy/carbon skeleton component, a macro nutrient component and a micro nutrient component is applied, e.g. in aqueous solution by foliar spraying. This is done in a manner to make optimum use of the inherent ability of vegetation to harvest solar energy and to utilize other sources of energy and carbon skeleton, such that the energy and nutrients applied by the
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method of the invention is a fraction of the energy and carbon skeleton requirements of the vegetation.

L6 ANSWER 2 OF 6 USPATFULL
AN 97:10027 USPATFULL
TI Synergistic insecticidal compositions comprising capsicum and insecticidal use thereof
IN Hainrihar, Gary C., Lawton, MI, United States
Dubberly, James G., Greenville, MS, United States
Greenlee, John T., Greenville, MS, United States
PA Kalamazoo Holdings, Inc., Kalamazoo, MI, United States (U.S. corporation)
PI US 5599803 970204
AI US 95-536987 950929 (8)
RLI Division of Ser. No. US 93-166695, filed on 14 Dec 1993
DT Utility
EXNAM Primary Examiner: Rollins, John W.
LREP The Firm of Gordon W. Hueschen
CLMN Number of Claims: 48
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 987
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Insecticidal compositions, comprising normally-employed insecticides but comprising also an effective activity-enhancing amount of capsaicin or other capsaicinoid, especially in the form of capsicum, exhibit synergistic effects against numerous insects, including especially bud worms, boll worms, cabbage loopers, army worms, beet army worms, and beetles, and are especially effective on cotton, soybeans, common garden vegetables, and flowers, when sprayed on the insect or its habitat, especially as an aqueous solution, suspension, or emulsion. Larger crop stands may be effectively treated by aerial spraying from the usual crop-dusting airplane.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 3 OF 6 USPATFULL
AN 96:77389 USPATFULL
TI Method and composition for promoting and controlling growth of plants
IN Yamashita, Thomas T., 1094 Clover La., Hanford, CA, United States 93230
PI US 5549729 960827
AI US 90-490351 900308 (7)
RLI Continuation-in-part of Ser. No. US 88-242951, filed on 9 Sep 1988, now abandoned And a continuation-in-part of Ser. No. US 89-354155, filed on 19 May 1989, now abandoned
Searcher : Shears 308-4994

DT Utility
 EXNAM Primary Examiner: Lander, Ferris
 LREP Flehr, Hohbach, Test, Albritton & Herbert
 CLMN Number of Claims: 16
 ECL Exemplary Claim: 1
 DRWN 4 Drawing Figure(s); 2 Drawing Page(s)
 LN.CNT 2438

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Composition for and method of stimulating growth of plants, e.g. increase in crop production. The composition comprises a carbon skeleton/energy component, typically a sugar or mixture of sugars; a macronutrient component providing the elements nitrogen, phosphorus, potassium and calcium, preferably also magnesium and sulfur; a micronutrient component providing zinc, iron and manganese, preferably also copper, boron, molybdenum and cobalt. The composition also preferably contains a vitamin/cofactor component and an enhancement component. The composition may be in the form of an aqueous solution or in a form suitable for coating seeds or coating pollen. It may be applied as a foliar spray, as a soil amendment, as a root dip or as an injectable solution. Preferably where, for example, it is used as a foliar spray it is applied at intervals at different stages of growth.

The method is useful for treating vegetation to promotes plant growth and/or crop production, also for treating pollen, seeds, roots and soil and inhibiting growth of insects and micro-organisms. A formulation including an energy/carbon skeleton component, a macro nutrient component and a micro nutrient component is applied, e.g. in aqueous solution by foliar spraying. This is done in a manner to make optimum use of the inherent ability of vegetation to harvest solar energy and to utilize other sources of energy and carbon skeleton, such that the energy and nutrients applied by the method of the invention is a fraction of the energy and carbon skeleton requirements of the vegetation.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 4 OF 6 USPATFULL
 AN 96:50894 USPATFULL
 TI Synergistic insecticidal compositions comprising capsicum and insecticidal use thereof
 IN Hainrihar, Gary C., Lawton, MI, United States
 Dubberly, James G., Greenville, MS, United States
 Greenlee, John T., Greenville, MS, United States
 PA Kalamazoo Holdings, Inc., Kalamazoo, MI, United States (U.S. corporation)
 PI US 5525597 960611
 AI US 93-166695 931214 (8)
 DT Utility

Searcher : Shears 308-4994

EXNAM Primary Examiner: Rollins, John W.
 LREP Hueschen, Gordon W.
 CLMN Number of Claims: 42
 ECL Exemplary Claim: 1
 DRWN No Drawings
 LN.CNT 969

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Insecticidal compositions, comprising normally-employed insecticides but comprising also an effective activity-enhancing amount of capsaicin or other capsaicinoid, especially in the form of capsicum, exhibit synergistic effects against numerous insects, including especially bud worms, boll worms, cabbage loopers, army worms, beet army worms, and beetles, and are especially effective on cotton, soybeans, common garden vegetables, and flowers, when sprayed on the insect or its habitat, especially as an aqueous solution, suspension, or emulsion. Larger crop stands may be effectively treated by aerial spraying from the usual crop-dusting airplane.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 5 OF 6 USPATFULL

AN 89:27719 USPATFULL
 TI Process for obtaining a pepper extract with insecticidal activity
 IN Pfeiffer, Hans, Haan, Germany, Federal Republic of
 Biermann, Manfred, Muelheim, Germany, Federal Republic of
 Schroeder, Peter, Viersen, Germany, Federal Republic of
 Goebel, Gerd, Erkrath, Germany, Federal Republic of
 Mueller, Annemarie, Monheim, Germany, Federal Republic of
 PA Henkel Kommanditgesellschaft auf Aktien, Duesseldorf, Germany,
 Federal Republic of (non-U.S. corporation)
 PI US 4820517 890411
 WO 8601981 860410
 AI US 86-878886 860724 (6)
 WO 85-EP333 850706

860724 PCT 371 date

860724 PCT 102(e) date

PRAI DE 84-3436859 841008

DT Utility

EXNAM Primary Examiner: Rollins, John W.

LREP Szoke, Ernest G.; Jaeschke, Wayne C.; Millson, Jr., Henry E.

CLMN Number of Claims: 16

ECL Exemplary Claim: 1

DRWN 1 Drawing Figure(s); 1 Drawing Page(s)

LN.CNT 290

AB An insecticidally active fraction is obtained from black pepper by a process comprising the following steps:

(a) extraction of black pepper in ground form with CO.sub.2 at 30
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to 70.degree. C. and 150 to 500 bar;

(b) removal of sharp tasting fractions therein in a first expansion step at 25 to 35.degree. C. and 70 to 150 bar;

(c) removal of an oily fraction containing the insecticidally active components as well as most of the essential oils in a second expansion step at 15 to 30.degree. C. and 40 to 70 bar;

(d) removal of essential oils by steam distillation, and if desired;

(e) hydrogenation of the insecticidally active components.

L6 ANSWER 6 OF 6 USPATFULL

AN 83:8921 USPATFULL

TI Dentifrice

IN Wahmi, Hakeem V. R., Hyderabad, India

PA Mathur, Krishan Dyal, Alexandria, VA, United States (U.S. individual)

PI US 4374824 830222

AI US 81-228791 810127 (6)

DT Utility

EXNAM Primary Examiner: Rose, Shep K.

LREP Sherman & Shalloway

CLMN Number of Claims: 4

ECL Exemplary Claim: 1

DRWN No Drawings

LN.CNT 462

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A dentifrice composition comprising 2.0-10.0% by weight ginger, 6.0-16.0% by weight magnesium silicate, 6.0-16.0% by weight sodium chloride; 6.0-16.9% by weight borax, 2.0-20.0% by weight catechu, 4.0-14.0% by weight **piper nigrum**, 4.0-14.0% by weight alum, 2.0-16.9% by weight seed and shell of sweet almond, 2.0-14.0% by weight pyrethrum, 4.0-20.0% by weight mastic, and 4.0-20.0% by weight tobacco, and the use thereof.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> d his 17-; d 1-17 bib abs

(FILE 'BIOSIS, MEDLINE, EMBASE, LIFESCI, BIOTECHDS, WPIDS, CONFSCI, DISSABS, SCISEARCH, JICST-EPLUS, PROMT, TOXLIT, TOXLINE, DRUGU, DRUGNL, DRUGLAUNCH, DRUGB' ENTERED AT 11:33:05 ON 09 SEP 1998)

L7 27 S L4

L8 17 DUP REM L7 (10 DUPLICATES REMOVED)

Searcher : Shears 308-4994

L8 ANSWER 1 OF 17 BIOSIS COPYRIGHT 1998 BIOSIS DUPLICATE 1
 AN 97:363433 BIOSIS
 DN 99655366
 TI Search for antibacterial and **antifungal** activity of some plants of Kerala.
 AU Sasidharan V K
 CS Dep. Life Sciences, Univ. Calicut, 673635 Kerala, India
 SO Acta Pharmaceutica (Zagreb) 47 (1). 1997. 47-51. ISSN: 1330-0075
 LA English
 AB Water and alcoholic extracts of some plants were tested for antibacterial and **antifungal** activity. Most of the plants showed considerable antibacterial and **antifungal** activity. Alcoholic extracts of plants were found to be better than aqueous extracts. The antimicrobial activity of plant extract differs with the test organism. Among the investigated plants, *Ixora coccinea* acts specifically on prokaryotic system. The therapeutic value of this plant against prokaryotic infection is high. Since it does not act against eukaryotic system it is safe for use.

L8 ANSWER 2 OF 17 BIOSIS COPYRIGHT 1998 BIOSIS DUPLICATE 2
 AN 96:384697 BIOSIS
 DN 99107053
 TI Antimycotic screening of 58 Malaysian plants against plant pathogens.
 AU Mohamed S; Saka S; El-Sharkawy S H; Ali A M; Muid S
 CS Fac. Food Sci. Biotechnol., Univ. Pertanian Malaysia, 43400 UPM Serdang, Selangor, Malaysia
 SO Pesticide Science 47 (3). 1996. 259-264. ISSN: 0031-613X
 LA English
 AB Ethanolic extracts of 58 Malaysian plants belonging to 24 different families were screened for **antifungal** activity against seven plant pathogens using the filter paper disc diffusion technique. Two varieties of *Piper betle*, showed strong activity against all the pathogens tested (*Colletotrichum capsici*, *Fusarium pallidroseum*, *Botryodiplodia theobromae*, *Alternaria alternata*, *Penicillium citrinum*, *Phomopsis caricae-papayae* and *Aspergillus niger*), with inhibition diameters significantly ($P < 0.01$) bigger than 2.5 mg ml⁻¹ prochloraz or 10 mg ml⁻¹ clotrimazole. The minimum inhibitory concentrations of the ethanolic extracts of *P. betle* against these plant pathogens ranged between 0.01 mg ml⁻¹ and 1 mg ml⁻¹. Thirty-four other plants (*Kucing gala*, *Limau batik*, *Bertholletia excelsa*, *Bixa orellana*, *Caesalpinia pulcherrima*, *Cerbera odollam*) (fruits and leaves), *Colocasia gigantea*, *Curcuma domestica*, *Curcuma manga*, *Derris eliptica*, *Elephantopus scaber*, *Eleusine indica*, *Eugenia polyantha*, *Euphorbia hirta*, *Euphorbia tirucalli*, *Gardenia florida*, *Hedyotis auricularia*, *Hibiscus rosa-sinensis*, *Juniperus chinensis* (three varieties), *Lawsonia inermis*, *Lecythis ollaria*,
 Searcher : Shears 308-4994

Mentha arvensis, *Mimusops elengi*, *Ocimum sanctum*, *Phyllanthus niruri*, **Piper nigrum**, *Piperomia pellucida*, *Pedilanthus tithymaloides*, *Polygonum minus*, *Spondias dulcis*, *Solanum nigrum*, *Tinospora tuberculata*) showed selective **antifungal** activity, while 21 species were inactive.

- L8 ANSWER 3 OF 17 JICST-EPlus COPYRIGHT 1998 JST
 AN 970045658 JICST-EPlus
 TI On Progress and Development in the Control of Black Pepper Diseases in Dominican Republic.
 AU MATSUDA AKIRA; HAMADA MASAHIRO
 CS Jpn. Int. Coop. Agency
 SO Nogyo Kaihatsu no tameno Gijutsu Joho. Jizokuteki na Jiritsu Hattensei o Motomete. Dai2shu. Heisei 8nen, (1996) pp. 218-237. Journal Code: N962826 (Fig. 6, Tbl. 10, Ref. 15)
 CY Japan
 DT Journal; Commentary
 LA Japanese
 STA New
- L8 ANSWER 4 OF 17 TOXLIT
 AN 1995:70406 TOXLIT
 DN CA-122-306478B
 TI Some pharmacodynamic effects and antimicrobial activity of essential oils of certain plants used in Egyptian folk medicine.
 AU Ramadan A; Afifi NA; Fathy MM; El-Kashoury EA; El-Naeneey EV
 CS Faculty of Veterinary Medicine, Cairo University, Giza
 SO Vet. Med. J. Giza, (1994). Vol. 42, No. 1 (B), pp. 263-70. CODEN: VMJGE. ISSN. 1110-1423.
 CY Egypt
 DT Journal; Article; (JOURNAL ARTICLE)
 FS CA
 LA English
 OS CA 122:306478
 EM 199509
 AB In this study ten essential oils were prepd. from their resp. natural sources namely *Cinnamomum cassia* bark (cassia), *Curcuma* sp. rhizomes (curcuma), *Elettaria cardamomum* fruit (cardamom), *Eugenia caryophyllus* flower buds (clove), *Origanum syriacum* herb (za'tar), *Origanum majoranum* herb (sweet marjoram), **Piper nigrum** fruit (black pepper), *Rosmarinus afficinalis* leaves (rosemary), *Salvia triloba* L. (maryamiyah), and *Zingiber officinalis* rhizomes (ginger). Their percentage yields, specific gravities and refractive indexes were detd. The essential oils of ginger and black pepper markedly stimulated the motility of rabbit jejunum at concns. greater than 47.2 and 70.0 mug/mL, resp. The other essential oils possessed intestinal antispasmodic effects on isolated rabbit's jejunum. All tested oils produced inhibitory effect on pregnant rat uterus. In the antimicrobial study, the
 Searcher : Shears 308-4994

sensitivity of 19 microbes (6 Gram-pos. and 6 Gram-neg. bacteria, and 7 fungi) to tested essential oils was investigated at different concns. (10, 25, 50, 100 and 200 mg/mL). Cassia oil showed a pronounced antibacterial activity against all tested bacteria in vitro. Essential oils of cardamom, curcuma, za'tar, sweet marjoram and maryamiyah showed a moderate antibacterial activity. Results of the **antifungal** study showed that cassia and clove essential oils caused a pronounced **antifungal** activity in vitro and in vivo. Curcuma, za'tar and sweet marjoram showed a marked activity against Trichophyton mentagrophytes. Za'tar showed also a moderate inhibitory activity against the other tested fungi.

L8 ANSWER 5 OF 17 BIOSIS COPYRIGHT 1998 BIOSIS DUPLICATE 3
 AN 94:31066 BIOSIS
 DN 97044066
 TI Essential oils: A potent source of natural pesticides.
 AU Singh G; Upadhyay R K
 CS Dep. Chem., Univ. Gorakhpur, Gorakhpur 273 009, IND
 SO Journal of Scientific and Industrial Research (India) 52 (10). 1993.
 676-683. ISSN: 0022-4456
 LA English
 AB A wide variety of essential oils and their constituents possess varying degrees of pest controlling properties. The plant extracts/essential oils of *Mentha piperita*, *Acorus calamus*, *Anethum sowa*, ***Piper nigrum***, *Pongamia glabra* and *Azadirachta indica* have been shown to exhibit grain protectants activity. It is pointed out that the alcoholic and phenolic constituents of essential oils show considerable toxicity to control egg hatching of *Aedes aegypti*. The oil of *Acorus calamus* inhibit embryonic development of *Dysdercus koenigii* at 100 ppm concentration. It is described that the volatile oils of *Eucalyptus*, Japanese mint, dill, turpentine and citronella show different degrees of attractant and repellent activity against rice weevil (*Sitophilus oryzae*), pulse beetle (*Callosobruchus chinensis*), spice beetle (*Stegobium paniceum*) and house fly (*Musca domestica*). The volatile constituents of several essential oils mainly mono- and sesquiterpenoids have been shown to exhibit strong repellent activity against house fly and cockroaches. It is documented that the volatile oils containing aliphatic straight chain ketones and aryl ketonic compounds also exhibit strong repelling tendency against bees. The mono-, sesqui-, di- and triterpenoids isolated from several aromatic plant species have been shown to possess potential antifeedant activity by contact action. It is described that the nerol, geraniol and citronellol act as Juvenile hormone (JH) analogues. The volatile oil of *Lantana camara* also exhibit JH like activity on fresh 5th instar nymphs of *Dysdercus similis*. It is argued that the majority of essential oils and their constituents are potent **antifungal** and antibacterial agents. Some of the oils such as *Citrus sinensis* and *Hyptis suaveolens* are found to be more potent than commercial synthetic

Searcher : Shears 308-4994

fungicides, and exhibit no phytotoxic effect on seedling growth and seed germination of green gram (*Vigna radiata*). It is described that naturally occurring essential oils and their constituents also exhibit remarkable toxicity against some parasitic worms.

L8 ANSWER 6 OF 17 BIOSIS COPYRIGHT 1998 BIOSIS DUPLICATE 4
 AN 90:503897 BIOSIS
 DN BR39:115893
 TI THE BIOLOGY AND CONTROL OF COLLETOTRICHUM-SPP ON TROPICAL FRUIT CROPS.
 AU JEFFRIES P; DODD J C; JEGER M J; PLUMBLEY R A
 CS BIOLOGICAL LAB., UNIVERSITY KENT, CANTERBURY, KENT CT2 6NJ, UK.
 SO PLANT PATHOL (OXF) 39 (3). 1990. 343-366. CODEN: PLPAAD ISSN: 0032-0862
 LA English

L8 ANSWER 7 OF 17 BIOSIS COPYRIGHT 1998 BIOSIS DUPLICATE 5
 AN 86:438881 BIOSIS
 DN BA82:105069
 TI THE SEARCH FOR NEW INSECTICIDAL AND **FUNGICIDAL** COMPOUNDS FROM PLANTS.
 AU MIYAKADO M
 CS PESTICIDES RES. LAB., TAKARAZUKA RES. CENT., SUMITOMO CHEM. CO. LTD., TAKATSUKASA, TAKARAZUKA 665, JPN.
 SO J PESTIC SCI 11 (3). 1986. 483-492. CODEN: NNGADV ISSN: 0385-1559
 LA Japanese
 AB For several years, our research group at Sumitomo has been conducting an extensive search for new biologically active natural products. Some of the isolated natural products could be looked upon as prototype models for synthetic research to develop new agrochemicals. In this paper, the followings are described as examples of our research: (i) The extract of black pepper fruits (**Piper nigrum** L.) exhibited strong insecticidal activity against several pests. A new amide, N-isobutyl-11-(3,4-methylenedioxyphenyl)-2E,4E,10E-2,4,10-undecatrienamide (pipericide), as well as two structurally related amides, were isolated as insecticidal principles. From the results of synthetic studies, N-isobutyl-12-(3-trifluoromethylphenoxy)-2E,4E-2,4-dodecadienamide was found to have especially potent activity. This amide, as well as the amides from pepper plants, exhibited notable paralyzing effects and lethal activity against pyrethroid-resistant houseflies. Electro-physiological studies using the central nerve cord of the American cockroach demonstrated that these amides are neurotoxic compounds. (ii) The chloroform extract of the stems and leaves of May apple (*Podophyllum peltatum* L.) showed **fungicidal** activity against rice blast. Three new 2-pyrones (podoblastin A, B and C) were isolated as **fungicidal** components and their structures were determined by synthesis. **Fungicidal** activities against rice

Searcher : Shears 308-4994

blast were greatly improved by structural modifications, and 3-(2-oxodecanyl)-4-hydroxy-6-n-propyl-5,6-dihydropyran-2-one was selected as the most potent compound. The preventive effect of this compound against rice blast was most successful, however, the curative and systemic effects require further improvement. (iii) A biphenyl (3,5-dimethoxy-4-hydroxybiphenyl, aucuparin), as well as a new dibenzofuran (2,4-dimethoxy-3-hydroxydibenzofuran, eriobofuran), were isolated as phytoalexins from fungi-infected loquat trees (*Eriobotrya japonica* L.). The structure of eriobofuran was determined by synthesis. Eriobofuran exhibited **fungicidal** activity against *Pestalotia funerea* (phytopathogenic fungi to loquat), however it did not show any activity against several fungi which are non-pathogenic to loquat. The biological significance of the self-induction of the phytoalexins in the loquat tree was considered in relation to plant resistance against fungal attack.

L8 ANSWER 8 OF 17 TOXLIT
 AN 1986:7971 TOXLIT
 DN CA-103-208744Y
 TI Uptake and persistence of metalaxyl in black pepper (*Piper nigrum* L.).
 AU Ramachandran N; Sarma YR
 CS Reg. Stn., Cent. Plant. Crops Res. Inst., Kerala
 SO J. Plant. Crops, (1985). Vol. 13, No. 1, pp. 38-40.
 CODEN: JPCRDW. ISSN. 0304-5242.
 CY India
 DT Journal; Article; (JOURNAL ARTICLE)
 FS CA
 LA English
 OS CA 103:208744
 EM 198601
 AB The exposure time required for the uptake of metalaxyl (I) [57837-19-1] and its persistence in black pepper (*P. nigrum*) were investigated using a leaf lesion bioassay. I at 1000 ppm applied as soil drench was translocated acropetally in significant quantity even 1 h after application. Leaf infection of I-treated plants was negligible on the 50th day, after which the activity of the **fungicide** was gradually reduced. I has an advantage over contact **fungicides** in controlling infections of *Phytophthora palmivora*, esp. under heavy rainfall conditions.

L8 ANSWER 9 OF 17 BIOSIS COPYRIGHT 1998 BIOSIS
 AN 85:241284 BIOSIS
 DN BA79:21280
 TI MICROBIOLOGICAL STATUS AND **ANTIFUNGAL** PROPERTIES OF IRRADIATED SPICES.
 AU SHARMA A; GHANEKAR A S; PADWAL-DESAI S R; NADKARNI G B
 CS BIOCHEM. FOOD TECHNOLOGY DIV., BHABHA ATOMIC RES. CENT., BOMBAY-400
 Searcher : Shears 308-4994

085, INDIA.

SO J AGRIC FOOD CHEM 32 (5). 1984. 1061-1063. CODEN: JAFCAU ISSN: 0021-8561

LA English

AB The bacterial counts of commercially available species were in the range of 102-107/g; the fungal counts varied between 102 and 103/g. Among the 5 spices studied, pepper [*Piper nigrum*], cardamom [*Elettaria cardamomum*] and nutmeg mace [*Myristica fragrans*] had a high microbial load compared to cinnamon [*Cinnamomum zeylanicum*] and clove [*Syzygium aromaticum*]. Exposure to .gamma.-irradiation in the dose range of 7.5-10 kGy [gray] was adequate to sterilize all the spices. The essential oil of clove and cinnamon exhibited inhibitory properties against aflatoxin-producing aspergilli. .gamma.-Irradiation did not affect fungal inhibitory principles present in clove, though marginal reduction was observed in that of cinnamon.

L8 ANSWER 10 OF 17 LIFESCI COPYRIGHT 1998 CSA

AN 82:40064 LIFESCI

TI Effects of some plant extracts on three sclerotia-forming fungal pathogens.

AU Chaudhuri, T.; Sen, C.

CS Dep. Plant Pathol., Bidhan Chandra Krishi Viswa Vidyalaya, Kalyani, Nadia, West Bengal, 741235, India

SO Z. PFLANZENKR. PFLANZENSCHULTZ., (1982) vol. 89, no. 10, pp. 582-585.

DT Journal

FS K; A

LA English

SL German; English

AB In vitro assessment of the potential of some plant extracts as fungitoxicants showed that out of six extracts of *Didymocarpus oblonga*, *Pongamia glabra*, *Tephrosia purpurea* and *Piper nigrum* tested on three sclerotia-forming pathogens *Sclerotium rolfsii*, *Rhizoctonia solani* and *Sclerotinia sclerotiorum*, the benzene extract of *Piper nigrum* had considerable fungitoxic activity. Activity was most prominent on *Sclerotium rolfsii*, moderate on *Rhizoctonia solani* and least on *Sclerotinia sclerotiorum*.

L8 ANSWER 11 OF 17 BIOSIS COPYRIGHT 1998 BIOSIS

AN 83:194471 BIOSIS

DN BA75:44471

TI EFFECTS OF SOME PLANT EXTRACTS ON 3 SCLEROTIA FORMING FUNGAL PATHOGENS.

AU CHAUDHURI T; SEN C

CS DEP. PLANT PATHOL., BIDHAN CHANDRA KRISHI VISWA VIDYALAYA, KALYANI, NADIA, WEST BENGAL, 741235, INDIA.

SO Z PFLANZENKR PFLANZENSCHUTZ 89 (10). 1981. 582-585. CODEN: ZPFPAA

Searcher : Shears 308-4994

ISSN: 0340-8159

LA English

AB In vitro assessment of the potential of some plant extracts as fungitoxicants showed that of the extracts of *Didymocarpus oblonga*, *Pongamia glabra*, *Tephrosia purpurea* and **Piper nigrum** tested on 3 sclerotia-forming pathogens *Sclerotium rolfsii*, *Rhizoctonia solani* and *Sclerotinia sclerotiorum*, the benzene extract of **P. nigrum** had considerable fungitoxic activity. Activity was most prominent on *S. rolfsii*, moderate on *R. solani* and least on *S. sclerotiorum*. The **fungicidal** activity of the benzene extract of **P. nigrum** was more inhibitory on mycelial growth than on sclerotia germination.

L8 ANSWER 12 OF 17 BIOSIS COPYRIGHT 1998 BIOSIS

AN 83:194481 BIOSIS

DN BA75:44481

TI A STUDY OF BLACK BERRY DISEASE CONTROL IN BLACK PEPPER **PIPER -NIGRUM** .

AU TIONG-KHENG K; OTHMAN F; CHING-PING C

CS DEP. AGRICULTURE, SARAWAK.

SO MALAYS AGRIC J 53 (1). 1981 (RECD. 1982). 20-28. CODEN: MAGJAL ISSN: 0025-1321

LA English

AB The local pepper variety, Kuching, was highly susceptible to black berry disease [caused by *Colletotrichum capsici*, *C. piperis* and *Cephaleuros virescens*] and the Indian variety, Uthirancotta and the Indonesian variety, Djambi, were less susceptible. Among the 17 **fungicides** evaluated, Bavistin, Benlate and Derosal significantly increased green berry yield and reduced the number of black spots per berry. Other promising **fungicides** include Bayleton, Difolatan, Manzate D, MK 23 and Topsin-M. Benlate 50 WP applied at 15 g/18 l of water as a spray at the onset of flowering 4 times per season at 3 wk intervals significantly increased yield.

L8 ANSWER 13 OF 17 BIOSIS COPYRIGHT 1998 BIOSIS DUPLICATE 6

AN 82:233160 BIOSIS

DN BA74:5640

TI EVALUATION OF CHEMICALS FOR THE CONTROL OF PHYTOPHTHORA-PALMIVORA FROM **PIPER-NIGRUM**.

AU TIONG-KHENG K; KHING-LING K

CS DEP. AGRIC., SARAWAK.

SO MALAYS AGRIC J 52 (3). 1980 (RECD. 1982). 263-272. CODEN: MAGJAL ISSN: 0025-1321

LA English

AB A number of organic and inorganic chemicals were tested for their effectiveness as growth inhibitors, protectants and eradicants, and as soil drench against *Phytophthora palmivora* (causal organism of foot rot disease of **Piper nigrum**). As growth inhibitors, most inorganic carbamate and phenyl compounds and a

Searcher : Shears 308-4994

majority of the other organic compounds tested were ineffective, whereas Acti-Dione, DOWCO 269 and the organic mercurial compounds tested were effective against mycelial growth of *Phytophthora palmivora*. Among those chemicals tested as leaf and root protectants, Aaterra and DOWCO 269 were better than the others. As eradicants for infected leaves and roots, none of the chemicals tested were totally effective in eliminating the fungus. However, Aaterra, Acti-Dione, Difolatan-4F and DOWCO 269 were comparatively better in decreasing or delaying the rate of infection. Among the 23 **fungicides** tested as soil drench, copper oxychloride, Vapam, Antimucin WBR, Tillex, Verdasan, Brunolex, Nectryl, Aaterra, Acti-Dione, Basamid, Ciluan, Delan, Difolatan-4F, DOWCO 269, DOW-XD-7603, Hoe 2873, Lysol, Neoasozin, Shell 345 soil **fungicide** and 1804-L showed good promise.

L8 ANSWER 14 OF 17 TOXLINE
 AN 1995:88746 TOXLINE
 DN IPA-79-356073
 TI Activity of essential oils of three medicinal plants against various pathogenic and nonpathogenic fungi.
 AU Chaurasia S C; Kher A
 CS Dept. of Botany, Univ. of Saugar, Saugar 470-003 M.P., India.
 SO Indian J. Hosp. Pharm, (1978). Vol. 15, No. 5, pp. 139-141 (REF 11).
 CODEN: IJHPBU. ISSN: 0019-526X.
 FS IPA
 LA English
 OS IPA 16-356073
 EM 199507
 AB IPA COPYRIGHT: ASHP The **antifungal** activity of **Piper nigrum** Lam exlink, Avapana triplinerve vahal and *Mentha arvensis* Linn was investigated against some pathogenic fungi, using a filter paper disk method. The study revealed that the oil of *Mentha arvensis* inhibited the growth of all fungi. As for the oils of **Piper nigrum** and Avapana triplinerve, while these showed good **antifungal** activity in general, they were inactive against *Aspergillus fumigatus* and *Penicilium decumbens*.

L8 ANSWER 15 OF 17 BIOSIS COPYRIGHT 1998 BIOSIS DUPLICATE 7
 AN 74:18095 BIOSIS
 DN BR10:18095
 TI EFFECTS OF **FUNGICIDES** USED AS SOIL DRENCHES IN LABORATORY TESTS AGAINST PHYTOPHTHORA-PALMIVORA FROM **PIPER-NIGRUM**.
 AU TURNER G J
 SO TRANS BR MYCOL SOC 61 (1). 1973 186-189 CODEN: BMSTA6 ISSN: 0007-1536
 DT Short Communication
 LA Unavailable

08/338489

L8 ANSWER 16 OF 17 TOXLIT
AN 1973:3315 TOXLIT
DN CA-078-000615Q
TI **Antifungal** studies on some indigenous volatile oils ad
their combinations.
AU Jain SR; Jain MR
CS Pharm. Sch., Univ. Saugar, Sagar, India
SO Planta Med, (1972). Vol. 22, No. 2, pp. 136-9.
CODEN: PLMEAA.
FS CA
LA English
OS CA 78:615
EM 197312
AB The essential oils from Zanthoxylum alatum and, to a less extent,
those from Acanthospermum hispidum, Polyalthia longifolia, Blumea
eriantha, and **Piper nigrum** showed good
antifungal activity against several pathogenic and
nonpathogenic fungi, and may have medicinal value when used in
topical preps. The fungi Trychophyton rubrum, Phialophora
verrucosa, and Microsporum cookei were not affected by the oils.

L8 ANSWER 17 OF 17 DRUGB COPYRIGHT 1998 DERWENT INFORMATION LTD
AN 68-16805 DRUGB M
TI ANTIBIOTIC ACTIVITY OF EXTRACTS, OBTAINED WITH LIQUIFIED CARBON
DIOXIDE, FROM MEDICINAL PLANTS. /RUSS./.
AU KHANIN M L; KOROTIAEV A I; PROKOPCHUK A F; PEROVA T V; VIAZEMSKY O
F
LO KRSNODARSK AND KUBANSK,USSR.
SO MED.PROM.SSSR
DT Journal

=> fil medl; d que

FILE 'MEDLINE' ENTERED AT 11:46:48 ON 09 SEP 1998

FILE LAST UPDATED: 3 SEP 1998 (19980903/UP). FILE COVERS 1966 TO DATE.

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MESH (MEDICAL SUBJECT HEADING) CHANGES. ENTER HELP RLOAD FOR DETAILS.

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SUBSTANCE IDENTIFICATION.

L9 250 SEA FILE=MEDLINE ABB=ON PLU=ON CAPSICUM/CT
L10 9318 SEA FILE=MEDLINE ABB=ON PLU=ON "ANTIFUNGAL AGENTS"/CT
L11 1 SEA FILE=MEDLINE ABB=ON PLU=ON L9 AND L10

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Searcher : Shears 308-4994

08/338489

L11 ANSWER 1 OF 1 MEDLINE

AN 97037730 MEDLINE

TI Fruit-specific expression of a defensin-type gene family in bell pepper. Upregulation during ripening and upon wounding.

AU Meyer B; Houlne G; Pozueta-Romero J; Schantz M L; Schantz R

SO PLANT PHYSIOLOGY, (1996 Oct) 112 (2) 615-22.

Journal code: P98. ISSN: 0032-0889.

AB We have isolated a 454-bp cDNA that encodes a novel fruit specific defensin from bell pepper (*Capsicum annuum*). The encoded 75-amino-acid polypeptide contains an N-terminal domain characteristic of a signal peptide and a 48-amino-acid mature domain named J1. The mature protein, from which the N-terminal amino acid sequence was determined, contains eight cysteines that form four intramolecular disulfide bridges, suggesting a monomeric form for J1. In healthy fruits J1 is undetectable at the green stage but high levels accumulate during ripening. In wound areas of the green fruit the accumulation of J1 dramatically increased, suggesting a role for J1 in the plant's defense response. Moreover, we have demonstrated that J1 possesses an antifungal activity. We have isolated and characterized the corresponding two homologous genes (j1-1 and j1-2) that exist in the bell pepper genome. Both genes are interrupted by the insertion, at the same position, of one intron of 853 bp for j1-1 and 4900 bp for j1-2. Northern blot and reverse transcriptase-polymerase chain reaction and restriction fragment length polymorphism analyses revealed that j1-1 transcripts are present only in fruits, only in trace amounts in mature green fruits, and that they accumulate to high levels in fully ripe fruits, whereas no j1-2 transcripts were detected in the samples monitored.

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08/338489

=> fil ca,caplus; d que

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L1 649 SEA (CAPSIC? OR C) (W) PEPPEROM? OR (PIPER OR P) (W) (RETROFR
ACT? OR RETRO FRACT? OR LONGUM OR NIGRUM)
L2 6 SEA L1(S) (TREAT? OR THERAP?)

=> dup rem l2

PROCESSING COMPLETED FOR L2
L3 3 DUP REM L2 (3 DUPLICATES REMOVED)

=> d 1-3 .beverly

L3 ANSWER 1 OF 3 CA COPYRIGHT 1998 ACS DUPLICATE 1
AN 126:210198 CA
TI Effect of essential oils on the lipids of the retina in the aging
rat: a possible therapeutic use
SO J. Essent. Oil Res. (1997), 9(1), 53-56
CODEN: JEOREG; ISSN: 1041-2905
AU Recsan, Zsuzsa; Pagliuca, Giampiero; Piretti, Marco V.; Penzes,
Laszlo G.; Youdim, Kuresh A.; Noble, Raymond C.; Deans, Stanley G.
PY 1997
AB A study has been made on the effects of the dietary administration
of a selection of volatile oils from medicinal plants on the
polyunsatd. fatty acid compn. in the retina of aged (28 mo old)
rats. Polyunsatd. fatty acids comprised by far the major proportion
of the total unsatd. content within the retinal phospholipids with
docosaehaenoic acid predominating. The administration daily of 3.9
mg of the essential oils from clove, nutmeg, pepper and thyme over a
period of 17 mo resulted in the maintenance of very much higher
levels of polyunsatd. fatty acids, in particular docosaehaenoic
acid, within the retinal phospholipids. This increase occurred
mainly at the expense of a redn. in the level of oleic acid. The
possible efficacy for the application of the oils from such
medicinal plants through their antioxidant capacities in the
prevention of age-related macular degeneration is discussed.

Searcher : Shears 308-4994

L3 ANSWER 2 OF 3 CA COPYRIGHT 1998 ACS DUPLICATE 2
 AN 120:45899 CA
 TI Evaluation of the hepatoprotective potential of piperine, an active principle of black and long peppers
 SO Planta Med. (1993), 59(5), 413-17
 CODEN: PLMEAA; ISSN: 0032-0943
 AU Koul, Indu Bala; Kapil, Aruna
 PY 1993
 AB Piperine, an active alkaloidal constituent of the ext. obtained from **Piper longum** and **Piper nigrum**, was evaluated for its antihepatotoxic potential in order to validate its use in traditional **therapeutic** formulations. This plant principle exerted a significant protection against tert-Bu hydroperoxide and carbon tetrachloride hepatotoxicity by reducing both in vitro and in vivo lipid peroxidn., enzymic leakage of GPT and AP, and by preventing the depletion of GSH and total thiols in the intoxicated mice. Silymarin, a known hepatoprotective drug was tested simultaneously for comparison. Piperine showed a lower hepatoprotective potency than silymarin.

L3 ANSWER 3 OF 3 CA COPYRIGHT 1998 ACS DUPLICATE 3
 AN 115:157392 CA
 TI Effect of different methods of white pepper preparation on the chemical and aroma quality in selected cultivars of **Piper nigrum** L
 SO Indian Perfum. (1990), 34(2), 152-6
 CODEN: IPERAS; ISSN: 0019-607X
 AU Gopalam, A.; Zachariah, John; Babu, K. Nirmal; Ramadasan, A.
 PY 1990
 AB White pepper by retting, steaming/boiling, and rolling and running water **treatment** from 3 popular cultivars of **P. nigrum** (Panmyur 1, Karimunda, and Arakulammunda) were compared. The effect of these treatments on piperine, oleoresin, essential oil, and on aroma-bearing constituents of the essential oil was studied. There was a redn. in the essential oil content of white pepper by all the methods in all 3 cultivars. Levels of pinene and caryophyllene, which impart off-flavor to the pepper oil decreased markedly, and terpineol, safrole, nerol, and phellandrene were either not affected or increased in white pepper prepd. by steaming and rolling. As this method requires only green pepper berries, farmers need not delay the harvest for red berries, traditionally used for white pepper prepn.

=> d his 14-; d 1-6 bib abs

(FILE 'USPATFULL' ENTERED AT 15:39:35 ON 09 SEP 1998)

L4 6 S L2

Searcher : Shears 308-4994

L4 ANSWER 1 OF 6 USPATFULL
AN 1998:44905 USPATFULL
TI Use of piperine as a bioavailability enhancer
IN Majeed, Muhammed, Piscataway, NJ, United States
Badmaev, Vladimir, Piscataway, NJ, United States
Rajendran, Ramaswamy, Jayanagar Eastend, India
PA Sabinsa Corporation, Piscataway, NJ, United States (U.S.
corporation)
PI US 5744161 980428
AI US 95-550496 951030 (8)
RLI Continuation-in-part of Ser. No. US 95-393738, filed on 24 Feb
1995, now patented, Pat. No. US 5536506
DT Utility
EXNAM Primary Examiner: Azpuru, Carlos A.
LREP Nikaido, Marmelstein, Murray & Oram LLP
CLMN Number of Claims: 35
ECL Exemplary Claim: 1
DRWN 3 Drawing Figure(s); 3 Drawing Page(s)
LN.CNT 991
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Compositions and methods for the improvement of gastrointestinal
absorption and systemic utilization of nutrients and nutritional
supplements, wherein the compositions comprise a minimum of 98% of
pure alkaloid piperine. The method comprises oral, topical, or
parenteral administration of the compositions of the invention. A
new process for the extraction and purification of piperine is
also disclosed.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 2 OF 6 USPATFULL
AN 1998:4235 USPATFULL
TI Therapeutic herbal composition
IN Lieberman, Chaim J., Monsey, NY, United States
PA Advanced Plant Pharmaceuticals Incorporated, Monsey, NY, United
States (U.S. corporation)
PI US 5707631 980113
AI US 96-641368 960430 (8)
DT Utility
EXNAM Primary Examiner: Rollins, John W.
LREP Coleman & Sudol
CLMN Number of Claims: 15
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 348
AB A therapeutic herbal composition including Trigonella
foenum-graecum seed, Syzygium aromaticum fruit, Allilum sativum
bulb, Cinnamomum zylanicum bark, Saussurea costus root and
Searcher : Shears 308-4994

Euphorbia lathyris bud which includes an effective amount of sodium chloride to promote the digestibility and storage stability of the compositions, have been shown effective in reducing cholesterol, and triglycerides. This herbal composition has use in lowering cholesterol and treating arthritis, blood pressure and Alzheimer's disease. It is also effective as a bitters tonic.

L4 ANSWER 3 OF 6 USPATFULL
 AN 97:117697 USPATFULL
 TI Lipolysis acceleration method
 IN Mori, Shinobu, Ichikai-machi, Japan
 Ichii, Yuji, Ichikai-machi, Japan
 Tanaka, Norihiro, Ichikai-machi, Japan
 Yorozu, Hidenori, Ichikai-machi, Japan
 Kanazawa, Satoshi, Ichikai-machi, Japan
 Nishizawa, Yoshinori, Ichikai-machi, Japan
 PA Kao Corporation, Tokyo, Japan (non-U.S. corporation)
 PI US 5698199 971216
 AI US 96-612018 960305 (8)
 PRAI JP 95-50881 950310
 JP 95-111549 950510
 DT Utility
 EXNAM Primary Examiner: Rollins, John W.
 LREP Oblon, Spivak, McClelland, Maier & Neustadt, P.C.
 CLMN Number of Claims: 10
 ECL Exemplary Claim: 1
 DRWN No Drawings
 LN.CNT 887
 AB The present invention provides a lipolysis acceleration method which comprises orally administering a thistle-series or pepper-family plant, or an extract thereof; or dermatologically applying it by local administration or as a bath medicine composition. According to the method of the present invention, marked lipolysis acceleration effects can be obtained. It exhibits excellent effects for the control, prevention and improvement of obesity.

L4 ANSWER 4 OF 6 USPATFULL
 AN 97:112167 USPATFULL
 TI Herbal compositions
 IN Shah, Eladevi, 50 Elm Croft Crescent, London NW11 9SY, United Kingdom
 PI US 5693327 971202
 AI US 95-501598 950712 (8)
 DT Utility
 EXNAM Primary Examiner: Rollins, John W.
 LREP Kubovcik & Kubovcik

Searcher : Shears 308-4994

CLMN Number of Claims: 13

ECL Exemplary Claim: 1

DRWN No Drawings

LN.CNT 708

AB The present invention relates to the preparation and use of compositions for the treatment of skin disorders such as psoriasis, eczema and lichen planus, as well as for the promotion of good health and the alleviation of stress. The compositions are based on extracts from the plants *Melia azadirachta* and/or *Centrathium anthelminthicum*. A variety of other herbal extracts may be included, and the compositions may take the form of a cream or ointment based on ghee, or they may be in a powdered form of suitable for preparing decoctions in hot water.

L4 ANSWER 5 OF 6 USPATFULL

AN 95:71342 USPATFULL

TI Process for preparation of pharmaceutical composition with enhanced activity for treatment of tuberculosis and leprosy

IN Kapil, Randhir S., Regional Research Laboratory, Jammu 180001, India
Zutshi, Usha, Regional Research Laboratory, Jammu 180001, India
Bedi, Kasturi L., Regional Research Laboratory, Jammu 180001, India
Singh, Gurbax, Regional Research Laboratory, Jammu 180001, India
Johri, Ramesh K., Regional Research Laboratory, Jammu 180001, India
Dhar, Santosh K., Regional Research Laboratory, Jammu 180001, India
Kaul, Jawahar L., Regional Research Laboratory, Jammu 180001, India
Sharma, Subhash C., Regional Research Laboratory, Jammu 180001, India
Pahwa, Gurcharan S., Regional Research Laboratory, Jammu 180001, India
Kapoor, Naveen, Regional Research Laboratory, Jammu 180001, India
Tickoo, Ashok K., Regional Research Laboratory, Jammu 180001, India
Tickoo, Manoj K., Regional Research Laboratory, Jammu 180001, India
Kaul, Uma, Regional Research Laboratory, Jammu 180001, India
Singh, Surjeet, Regional Research Laboratory, Jammu 180001, India
Zutshi, Ram K., Regional Research Laboratory, Jammu 180001, India
Singh, Rajinder, Regional Research Laboratory, Jammu 180001, India

PI US 5439891 950808

AI US 93-142973 931029 (8)

DT Utility

EXNAM Primary Examiner: Nutter, Nathan M.

LREP Bednarek, Michael D. Marks & Murase

Searcher : Shears 308-4994

08/338489

CLMN Number of Claims: 4
ECL Exemplary Claim: 1
DRWN 15 Drawing Figure(s); 12 Drawing Page(s)
LN.CNT 593

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A new pharmaceutical composition for the treatment of tuberculosis and leprosy, said composition comprising piperine in combination with known antituberculosis or antileprosy drugs or the mixtures thereof.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 6 OF 6 USPATFULL
AN 90:74826 USPATFULL
TI Method for increasing the yield of crops
IN Kumura, Atsuhiko, Chiba, Japan
Ishii, Ryuichi, Tokyo, Japan
Luo, Bing-Shan, Chiba, Japan
Adachi, Meiro, Kanagawa, Japan
Hamada, Kenji, Kanagawa, Japan
Fujita, Fumio, Kanagawa, Japan
PA National Federation of Agricultural Co-Operative Associations,
Tokyo, Japan (non-U.S. corporation)
Nissan Chemical Industries, Tokyo, Japan (non-U.S. corporation)
PI US 4959091 900925
AI US 85-777746 850919 (6)
PRAI JP 84-195658 840920
JP 85-116537 850531
DT Utility
EXNAM Primary Examiner: Hollrah, Glennon H.; Assistant Examiner: Owens,
Amehn A.
LREP Birch, Stewart, Kolasch & Birch
CLMN Number of Claims: 17
ECL Exemplary Claim: 1
DRWN 17 Drawing Figure(s); 9 Drawing Page(s)
LN.CNT 1574

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The yield of crops (such as rice, wheat, corn, potato, soybean and other like major crops) can be increased according to a method wherein plants capable of yielding such crops are treated at a specific stage in their growing period with brassinolide, i.e. (2.alpha.,3.alpha.,22R,23R)-tetrahydroxy-24S-methyl-B-homo-7-oxa-5.alpha.-cholestan-6-one of the formula: ##STR1##

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> d his 15-

Searcher : Shears 308-4994

(FILE 'BIOSIS, MEDLINE, EMBASE, LIFESCI, BIOTECHDS, WPIDS, CONFSCI, DISSABS, SCISEARCH, JICST-EPLUS, PROMT, TOXLIT, TOXLINE, DRUGU, DRUGNL, DRUGLAUNCH, DRUGB' ENTERED AT 15:41:19 ON 09 SEP 1998)

L5 88 S L2
 L6 50 DUP REM L5 (38 DUPLICATES REMOVED)
 L7 2 S L6 AND (FUNG##(3A) (DISEAS? OR DISORDER))

=> d 1-2 bib abs

L7 ANSWER 1 OF 2 BIOSIS COPYRIGHT 1998 BIOSIS
 AN 97:398014 BIOSIS
 DN 99697217
 TI Evaluation of arbuscular mycorrhizal fungi inoculation on the incidence of fusarium root rot of black pepper.
 AU Chu E Y; Endo T; Stein R L B; Albuquerque F C D
 CS CPATU, Caixa Postal 48, 66095-100 Belem, PA, Brazil
 SO Fitopatologia Brasileira 22 (2). 1997. 205-208. ISSN: 0100-4158
 LA Portuguese
 AB Fusarium root rot (*Fusarium solani* f. sp. *piperis*) of black pepper (*Piper nigrum*) is the most destructive disease of black pepper in the Amazon region. The recommended methods do not show adequate control of the disease. It is necessary to study new methods of control. In order to verify the possibility of reducing disease incidence by inoculation with arbuscular mycorrhizal fungi (AMF), an experiment was conducted with black pepper seedlings, cv. Guajarina, in a plastic house. Four species of AMF were tested: *Scutellospora* sp., *S. heterogama*, *S. gilmorei* and *Entrophospora colombiana*. Pre-inoculation was performed by depositing the soil-inoculum right underneath the root system of cotyledonous stage seedlings, in 500 ml plastic cups containing fumigated soil. Three and half months later, the seedlings were transferred to 4 kg plastic pots containing a mixture of fumigated soil and an inoculum of *F. solani* f. sp. *piperi*, in the ratio of 0.2% (v/v). During the transplantation, reinoculation of AMF was carried out by depositing the soil-inoculum of the same species on the bottom of the plastic pot. The experiment was evaluated four months later. Fusarium root rot incidences were 5%, 10%, 15%, 35% and 85% for the treatments of *S. gilmorei*, *E. colombiana*, *S. heterogama*, *Scutellospora* sp. and control without inoculation, respectively. The mycorrhizal inoculation reduced disease incidence from 50 to 80% with *S. gilmorei* being the species which showed the greatest potential for disease control, dry matter production of surviving plants (11.7g/plant) and percentage of colonized root length (55.18%). From the results obtained, there is a perspective to incorporate the use of AMF into a control program of fusarium root rot of black pepper.

L7 ANSWER 2 OF 2 EMBASE COPYRIGHT 1998 ELSEVIER SCI. B.V.
 AN 85128050 EMBASE

Searcher : Shears 308-4994

TI Integrated control of the root-knot nematode, *Meloidogyne incognita*, on black-pepper plantations in the amazonian region.

AU Ichinohe M.

CS Instituto Experimental Agricola Tropical da Amazonia, Tome-Acu, Para, Brazil

SO AGRIC. ECOSYST. ENVIRON., (1984) 12/4 (271-283).
CODEN: AEENDO

CY Netherlands

LA English

AB In the Amazonian region, so-called foot-rot disease, caused by a fungus *Nectria*, occurs widely of black-peppers, *Piper nigrum* L., the roots of which are also heavily infested by the root-knot nematode, *Meloidogyne incognita*. Factorial experiments were conducted in this region during 1976-78 to attempt to find out the effect of nematicide treatment, mulching with *Imperata cylindrica*, and non-host cover plantings, on the growth of black-peppers as well as on nematode population levels. Temic or Furadan treatment resulted in better plant growth and a reduced nematode population in the first year. Mulching resulted in exceedingly high plant growth, even though higher nematode populations were also observed. Under mulching conditions, soil temperatures at 5-cm depth seldom rose beyond 30.degree.C throughout the year. Cover planting of non-hosts, which had been selected by earlier inoculation tests, indicated remarkable retardation of plant growth of black-peppers, evidently due to the competition, and this also reduced the nematode population. *Macroptilium atropurpureum* (siratro) gave the smallest growth retardation of black-peppers. From these results, a combination of three procedures, i.e. Temic or Furadan treatment, mulching with grass straw, and cover-planting of non-hosts such as siratro, is recommended on black-pepper plantations for better plant growth and eventually better yield of black-peppers in the fields infested by root-knot nematodes.

=> d his l8-; d 1-4 bib abs

(FILE 'BIOSIS, MEDLINE, EMBASE, LIFESCI, BIOTECHDS, WPIDS, CONFSCI, DISSABS, SCISEARCH, JICST-EPLUS, PROMT, TOXLIT, TOXLINE, DRUGU, DRUGNL, DRUGLAUNCH, DRUGB' ENTERED AT 15:41:19 ON 09 SEP 1998)

L8 6 S L5(S)DISEAS?
L9 4 S L8 NOT L7
L10 4 DUP REM L9 (0 DUPLICATES REMOVED)

L10 ANSWER 1 OF 4 DRUGU COPYRIGHT 1998 DERWENT INFORMATION LTD
AN 97-47709 DRUGU M C
TI The antibacterial activity of fruits of Sri Lankan *Piper* species.
Searcher : Shears 308-4994

AU Houghton P J; Priyadarshana A
 CS Univ.London
 LO London, U.K.
 SO J.Pharm.Pharmacol. (49, Suppl. 4, 116, 1997) 1 Fig. 1 Ref.
 CODEN: JPPMAB ISSN: 0022-3573
 AV Pharmacognosy Research Laboratories, Kings's College London,
 Manresa Road, London SW3 6LX, England.
 LA English
 DT Journal
 FA AB; LA; CT
 FS Literature
 AN 97-47709 DRUGU M C
 AB The fruits of Piper species (Piperaceae) have long been used as
 spices and in traditional medicine in SE Asia. In Sri Lanka the
 fruits of *P. nigrum* (Black pepper), *P. cubeba*
 (Cubebs) and *P. longum* (Long pepper) are common
 products and used to treat infectious respiratory
 diseases. Thus, ethanolic and chloroform extracts of the 3
 Piper species above were tested against *E. coli*, *Staph. aureus* and
Bacillus subtilis. *P. nigrum* and *P.*
longum extracts inhibited the growth of *B. subtilis*; *P.*
cubeba was ineffective. The antibacterial properties of Piper
 fruits seemed to be associated with the presence of 2 alkaloids:
 piperine (1) and its E,Z isomer isochavicine (2). (conference
 abstract).
 ABEX The extracts were tested by applying 500 and 1000 ug of each to
 silica gel layers, overlaying with agar seeded with bacteria.
 Plates were incubated at 37 deg for 24 and 48 hr and any zones of
 inhibition noted. No inhibition zones were observed for any of the
 extracts when *E. coli* and *Staph. aureus* was used, but extracts of
P. nigrum and *P. longum* inhibited the growth of *B. subtilis*. The
 extracts were separated by TLC silica gel GF254/toluene:ethyl
 acetate 7:3. Duplicate plates were run, one being visualized under
 UV light 254 nm and then sprayed with Dragendorff's reagent and the
 other overlaid with agar seeded with *B. subtilis* and then incubated
 as above. Inhibitory zones for the active extracts were seen to
 correspond with the same Dragendorff-positive zones in both
 species. No alkaloids could be detected in the *P. cubeba* extract,
 which had shown no antibacterial activity. Fractionation of the
 extracts by solvent partition showed that the activity resided in
 the weakly basic alkaloid portion. Fractions arising from silica
 gel column chromatography of this fraction (using a solvent
 gradient of toluene with increasing quantities of ethyl acetate)
 were tested against *B. subtilis*. 2 Sets of fractions giving
 inhibition were observed for both *P. nigrum* and *P. longum*. TLC
 showed that each set contained 1 major alkaloid. These 2 alkaloids
 were isolated by prep TLC (Silica gel/toluene: ethyl acetate:
 hexane: butan-2-one 7:3:1:1) and their structures determined by NMR
 and MS. The 2 compounds were shown to be piperine (1) and its E,Z

isomer isochavicine (2), with piperine as the major alkaloid.
(E54/RSV)

L10 ANSWER 2 OF 4 BIOSIS COPYRIGHT 1998 BIOSIS
AN 85:273005 BIOSIS
DN BA79:53001
TI LITTLE LEAF DISEASE OF PIPER-NIGRUM IN SRI-LANKA.
AU RANDOMBAGE S; BANDARA J M R S
CS DEP. AGRIC. BIOL., FACULTY AGRIC., UNIV. PERADENIYA, PERADENIYA, SRI LANKA.
SO PLANT PATHOL (LOND) 33 (4). 1984. 479-482. CODEN: PLPAAD ISSN: 0032-0862
LA English
AB In recent years black pepper (*P. nigrum*) in Sri Lanka has become affected with 'little leaf' disease. The main symptoms are chlorosis of leaves, shortening of internodes, proliferation of branches, greening and enlargement of floral bracts. Detailed measurements within experimental plots of 2 improved cultivars Panniyur 1 and Kuching, indicated that leaf size, the number of flowers per spike and berry weight were reduced on infected vines. Seeds from infected vines germinated less well than those from healthy vines. In a field trial, disease spread was similar in plots planted with pepper at different spacings and receiving different fertilizer treatments.

L10 ANSWER 3 OF 4 BIOTECHDS COPYRIGHT 1998 DERWENT INFORMATION LTD
AN 84-01617 BIOTECHDS
TI Studies on the constituents of the crude drug *Piperis Longi* Fructus; on the alkaloids of fruits of *Piper longum* L.; isolation of piperine as active component and novel compounds pipernonaline and piperundecalidine
AU Tabuneng W; Bando H; *Amiya T
LO Hokkaido Institute of Pharmaceutical Sciences, 7-1, Katsuraoka-cho, Otaru 047-02, Japan.
SO Chem.Pharm.Bull.; (1983) 31, 10, 3562-65
CODEN: CPBTAL
DT Journal
LA English
AN 84-01617 BIOTECHDS
AB The crude drug *Piperis Longi* Fructus (*Piper longum* fruit) is widely used as an anodyne and a treatment for stomach disease in China. The ethanol extract of the medicinal fruits gave a crystalline compound, piperine, as a main component. The residue left after the separation of piperine was saponified with 15% KOH solution to give a precipitate, which was chromatographed over alumina gel to afford 3 fractions (I-III). The novel piperidine alkaloids, pipernonaline (2) and piperundecalidine (3), were isolated from fraction II by chromatography on a silica gel column and on a Lobar
Searcher : Shears 308-4994

08/338489

column. Structures (1) and (2) were elucidated on the basis of MS, UV, IR, PMR and CMR spectral data as (2E,8E)-N-(9-(3,4-methylenedioxyphenyl)-2,8-nonadienoyl)piperidine and (2E,4E,10E)-N-(11-(3,4-methylenedioxyphenyl)-2,4,10-undecatrienoyl)piperidine, respectively. Since piperine (1) was the only compound to exhibit a pungent effect, it appears to be the only active principle of this plant. (11 ref)

L10 ANSWER 4 OF 4 TOXLINE
AN 1995:52226 TOXLINE
DN IPA-72-56150
TI Antibacterial activity of some essential oils and their combinations.
AU Jain S R; Kar A
CS Department of Pharmaceutical Sciences, University of Saugar, Saugar, M.P., India.
SO Planta Med, (1971). Vol. 20, Sep, pp. 118-123 (REF 8).
CODEN: PLMEAA. ISSN: 0032-0943.
FS IPA
LA English
OS IPA 09-56150
EM 199507
AB IPA COPYRIGHT: ASHP Essential oils of Indian *Zanthoxylum alatum*, *Acanthospermum hispidum*, *Polyalthia longifolia*, *Blumea eriantha*, and **Piper nigrum**, individually and in combinations, were tested against the conventional strains of 15 pathogenic and nonpathogenic microorganisms. Combinations of the oils were more effective than individual oils. The combination of *Z. alatum* and *B. eriantha* should be studied clinically in order to assess its effect in dermatology and in the **treatment** of certain infectious diseases.

=> fil hom

FILE 'HOME' ENTERED AT 16:00:14 ON 09 SEP 1998